

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AIKO HANYU
and
BEN WAYNE HICKS

Appeal 2007-1001
Application 10/602,197
Technology Center 1700

Decided: March 14, 2007

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and THOMAS A. WALTZ, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 21-26. Claim 21 is illustrative:

21. In a process for the production of a multilayer film having a substrate layer and a surface layer, the process comprising:

- (a) providing a first crystalline thermoplastic polymer;
- (b) extruding the first crystalline thermoplastic polymer and forming the first crystalline thermoplastic polymer into a flexible substrate layer having an interface surface;
- (c) providing a second polymer comprising a polymer consisting essentially of a syndiotactic propylene polymer having a melt flow index of less than 2 grams/10 minutes produced by the polymerization of propylene in the presence of a syndiospecific metallocene catalyst effective to form a surface layer, the surface layer capable of producing a heat seal with itself at a seal temperature less than 110°C;
- (d) extruding the syndiotactic propylene polymer to form a surface layer; and
- (e) bonding the surface layer to the interface surface of the substrate layer to form a multilayer film having a surface of syndiotactic propylene polymer which has a thickness that is less than the thickness of the substrate layer.

The Examiner relies upon the following references as evidence of obviousness:

Bothe	US 5,254,394	Oct. 19, 1993
Peet	US 6,387,529 B1	May 14, 2002

Appellants' claimed invention is directed to a process for producing a multilayer film having a substrate layer and a surface layer wherein the surface layer comprises a polymer consisting essentially of a syndiotactic propylene polymer having a melt flow index of less than 2 grams/10 minutes.

Appealed claims 21-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bothe in view of Peet.

Appellants have not separately argued any particular claim on appeal. Accordingly, all of the appealed claims stand or fall together with claim 21.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejection for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

The sole argument advanced by Appellants is that Bothe discloses a syndiotactic propylene polymer having a high melt flow index, not the presently claimed melt flow index of less than 2 grams/10 minutes. The Examiner appreciates that Bothe discloses a propylene surface layer having a melt flow index greater than the claimed value. However, the Examiner cites Peet as evidence that it would have been obvious for one of ordinary skill in the art to select a polypropylene surface layer having a melt flow index within the claimed range. Peet specifically discloses a biaxially oriented multi-layer film having a surface layer of syndiotactic polypropylene having a melt flow index of less than 2 grams/10 minutes. Accordingly, the Examiner concludes that it would have been obvious for one of ordinary skill in the art to employ a surface layer of syndiotactic polypropylene having a melt flow index within the claimed range in forming a multi-layer film of the type disclosed by Bothe.

Appellants respond that one of ordinary skill in the art would not modify the melt flow index of Bothe's surface layer because "it is well known in the art that as the MFI of a polymer decreases, the optical properties, such as

gloss, also deteriorate" (sentence bridging pages 4 and 5 of principal Br.). Appellants maintain that "*Bothe* is aimed at increasing gloss and therefore there is no motivation to modify the primary reference with a low MFI (low gloss) polymer as taught by *Peet*" (page 5 of principal Br., first para.). Appellants contend that there would have been no motivation to modify *Bothe* in such a way to render it inoperable or to destroy its intended function.

We, like the Examiner, are not persuaded by Appellants' argument. In our view, while one of ordinary skill in the art might have reasonably expected that the gloss would be reduced when a surface layer of lower melt flow index is used, we concur with the Examiner that it would have been *prima facie* obvious for one of ordinary skill in the art to sacrifice the property of high gloss when such property is not necessary. Also, while one of ordinary skill in the art might have reasonably expected a reduction in gloss when using a surface polymer of higher melt flow index, the Examiner properly notes that Appellants have not established that "the specific MFI range taught by *Peet* would substantially reduce the gloss to an unacceptable level" (page 5 of Answer, third para.). Also, the Examiner points out that while the *Cabot* reference cited by Appellants also suggests that other optical properties, such as haze, may be adversely affected as the MFI is lowered, *Bothe* indicates that the overall haze of the film is not adversely affected when a polypropylene having a low MFI is used. Consequently, we are satisfied that one of ordinary skill in the art would have found it obvious to select a melt flow index for the surface layer that produces the particular properties desired, such as gloss, in constructing a multilayer film within the scope of the appealed claims. We observe that Appellants have not

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demonstrated that films within the scope of the appealed claims, having a surface layer with the recited melt flow index, exhibit a higher gloss than would have been expected by one of ordinary skill in the art. Indeed, Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv)(effective Sept. 13, 2004).

AFFIRMED

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